

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A process for the production of sulphuric acid, wherein comprising reacting a sulphur dioxide-containing feed gas is reacted, at least in part, with oxygen in at least two contact stages of main contacts, arranged in series, to generate sulphur trioxide, and wherein feeding the generated sulphur trioxide-containing gas is fed to an absorber and reacting said sulphur trioxide-containing gas reacted therein to form sulphuric acid, wherein withdrawing a partial stream of the sulphur dioxide and sulphur trioxide-containing gas is withdrawn from a contact stage located upstream of the last main contact stage, mixing and that the said partial stream is mixed with the feed gas to form a contact gas having a sulphur dioxide content of more than 13 % by volume, and returning said mixed partial stream then returned to [[a]] the first contact stage.

2. (currently amended) [[A]] The process according to claim 1, wherein the contact gas has a sulphur dioxide content of between 14 and 25 % by volume.

3. (currently amended) [[A]] The process according to claim 1, wherein the air and/or technical oxygen is supplied to the feed gas, preferably prior to being mixed with the partial stream, and that wherein the O₂ to SO₂ ratio in the contact gas, based on the volumetric portions thereof, is adjusted to less than 1.2, preferably less than 0.8.

4. (currently amended) [[A]] The process according to claim 3, wherein the volumetric portion of the partial stream supplied to the feed gas[[.]] amounts to between 15 and 35% of the contact gas.

5. (currently amended) [[A]] The process according to claim 1, wherein further comprising providing a pre-contact is provided upstream from the main contact to which the contact gas is fed, that withdrawing a process gas containing, at best, no more than 13 % by volume of sulphur dioxide is withdrawn from the pre-contact, and that the supplying said process gas is supplied to the first contact stage of the main contact.

6. (currently amended) [[A]] The process according to claim 5, wherein the pre-contact comprises one or two pre-contact stages.

7. (currently amended) [[A]] The process according to claim 5, wherein the process gas discharged from the pre-contact, prior to being introduced into the main contact, is passed through a pre-absorber.

8. (currently amended) [[A]] The process according to claim 5, wherein the process gas discharged from the first main contact, prior to being introduced into the second main contact, is supplied to an intermediate absorber.

9. (currently amended) [[A]] The process according to claim 5, wherein the process gas discharged from the second main contact is supplied to a final absorber.

10. (currently amended) [[A]] The process according to claim 5, wherein further comprising conducting at least part of the process gas discharged from the pre-contact[[,]] via a bypass line, is conducted past the pre-absorber directly into the main contact (2).

11. (currently amended) [[A]] The process according to claim 9, wherein the gas discharged from the final absorber is subjected to gas scrubbing, in particular, with hydrogen peroxide, ammonia or sodium hydroxide forming the neutralizing agent for the sulphur dioxide.

12. (currently amended) [[A]] The process according to claim 9, wherein the partial stream, prior to being returned to the first contact stage, is cooled to a temperature of less than 500 <500 °C.

13. (currently amended) [[A]] The process according to claim 9, wherein the amount of the gas re-circulated as the partial stream is adjusted on the basis of the temperature at which the gas leaves the first contact stage.

14. (currently amended) A plant for the production of sulphuric acid, in particular, for carrying out the process according to claim 1, comprising at least two contact stages of main contacts arranged in series[[,]] for converting a sulphur dioxide-containing feed gas with oxygen to generate sulphur trioxide, ~~and comprising~~ at least one absorber, ~~wherein and a pre-contact, located upstream of the main contact stage, comprising~~ at least one pre-contact stage, ~~is located upstream of the main contact stage, and that wherein~~ the exit of one contact stage located upstream of the last contact stage of the main contact, e.g. via a re-circulation line, is connected with the inlet of the first pre-contact stage ~~via a re-circulation line.~~

15. (currently amended) [[A]] The plant according to claim 14, wherein the re-circulation line includes comprises a hot gas blower.

16. (currently amended) [[A]] The plant according to claim 14, wherein the re-circulation line originates at the exit of the last contact stage of the first main contact and leads to the inlet of the pre-contact.

17. (currently amended) [[A]] The plant according to claim 14, wherein the re-circulation line originates at the exit of the last contact stage of the pre-contact and leads to the inlet of the pre-contact.

18. (currently amended) [[A]] The plant according to claim 14, wherein the pre-contact comprises one or two pre-contact stages, that the first main contact comprises three main contact stages, and that the second main contact comprises two main contact stages.

19. (currently amended) [[A]] The plant according to claim 14, wherein further comprising a pre-absorber between the pre-contact and the first main contact a-pre-absorber is provided; an intermediate absorber between the first main contact and the second main contact, an intermediate absorber is provided and a final absorber downstream of the second main contact a-final absorber is provided.

20. (currently amended) [[A]] The plant according to claim 19, wherein further comprising, between the pre-contact and the first main contact, a bypass line leading around the pre-absorber is provided.

21. (currently amended) [[A]] The plant according to claim 14, wherein, further comprising, between the inlet lines of the pre-contact and of the first main contact, a bypass line leading around the pre-contact is provided.